

created from calculated alterations based on the measured parametric values. The secondary profile is a mathematical extrapolation of the primary profile. It is not another digitized profile. In an analogy to Schmitt's invention, if Schmidt were to capture the profile at a single cross section and then create the CAD model from side measurements or heuristic assumptions regarding the shape of the tooth at other sections, then, and only then, would Schmitt have disclosed or anticipated the claims of this invention. There is no evidence to support Schmitt's anticipation, consideration, or disclosure of parametric extrapolated surfacing.

Responses to Specific Claim Rejections

Schmitt's invention describes a now common reverse engineering or digitization process known as "destructive digitization". A Minnesota based company, doing business as, CGI, Inc., www.cgiinspection.com sells the both machinery, software, and services based on the "Capture Geometry Internally" technology. CGI also sells its patented Automated Cross-Sectional Scanning (ACSS) equipment. Again these systems are based on scanning and digitizing multiple cross sections spaced as close to each other as is required or as is practical. In contrast my invention comprises a single cross section along with the measurement and use of parametric values.

As evidence of the novelty of this invention, neither the inventor nor the USPTO has discovered in the prior art, any theoretical or commercial examples of the method and apparatus claimed in this invention. The distinguishing fact that this invention requires only a single profile should have been made clear by the previously amended claims wherein all references to "profiles" (plural) were changed to "profile" (singular).

In particular, the inventor/applicant finds no relevance to step "2) Defining 3-dimensional parametric representation of an object", in the examiners citation of Schmitt's (col. 4, lines 47-66). In the examples provided in this invention the term "parameters" refers to the side angle measurements in the case of the recoil pad fitting process, and to the diameters and positions of the gun barrel in the case of the vent rib fitting process. Schmitt does not define or reference any particular parameter or

parametric value. And with respect to the citation of “integrated instruction and data acquisition form”, the applicant/inventor finds no similarity whatsoever in Schmitt’s paragraph (col.5, lines 36-61), and argues that this particular citation is irrelevant.

With respect to the use of: CNC machinery, data transmission over the Internet, and rotating cutter tools, the applicant/inventor concedes the obviousness of the use of these common tools. It is however, the novelty of their use in combination for the unique and unobvious advantages specifically cited in this invention, which make them key elements of this invention.

In lieu of the above stated arguments, the applicant/inventor hereby requests that the claims be reconsidered in their previously amended condition repeated here.